Winter 2008

CEG 860-01: Object-Oriented Programming

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CEG 860 Object-Oriented Programming

- **Instructor:** T. K. Prasad
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- **Quarter:** Winter, 2008
- **Class Hrs:** Tu Th, 6:05pm to 7:20pm, 193 Joshi.
- **Office Hrs:** Tu Th, 5pm to 6pm. 395 Joshi Research Center (or by appointment)

Course Objective

- To study the *why*, *what*, and *how* of Object-Oriented Programming.

Course Prerequisite

- CEG 760 Software Engineering

Course Description

This course motivates the need for object-oriented programming, and studies, in detail, object-oriented programming techniques, languages, and technology. The lectures will focus on the foundations of OOP, while the student presentations will focus on the applications and extensions of Object Technology.

Course Load

The course load includes programming assignments (in Java) and a presentation (with descriptive notes) worth 40 points, a midterm worth 30 points, and a final worth 30 points.

Texts

- Bertrand Meyer: *Object-Oriented Software Construction*. 2nd Edition. Prentice Hall, 1997. ISBN 0-13-629155-4
- Clemens Szyperski *et al*: *Component Software: Beyond Object-Oriented Programming*. 2nd Edition. Addison-Wesley, 2002. ISBN 0-201-74572-0

Reference

- Timothy Budd: *Introduction to Object-Oriented Programming*. 3rd Ed. Addison-Wesley, 2002. ISBN: 0-201-76031-2
- The Links Galore
- Garbage Collection
- K. Thirunarayan, G. Kniesel, and H. Hampapuram, Simulating Multiple Inheritance and Generics in Java, In : *Computer Languages,* Vol. 25(4), pp. 189-210, 2001.

Grading

The letter grades will be assigned using the following scale: A[90-100], B[80-90), C[70-80), D[60-70), and F[0-60). However, I reserve the right to adjust the scale somewhat to utilize the gaps in the distribution.

Class Schedule and Syllabus

	Topic
Class 0	Software Hell Bug Bites
Class 0	Professional Responsibility
Class 1	Motivation : Software Quality
Class 2	Intro. to OOP ; OOP by Examples
Class 3	(* cont *)
Class 4	Modularity; Reusability
Class 5	Classes ; Genericity
Class 6	Objects ; Garbage Collection
Class 7	(* cont *)
Class 8	Design by Contract; Exceptions
Class 9	Inheritance; Dynamic Binding
Class 10	Composition; Delegation
Class 11	Multiple Inheritance ; Implementation
Class 12	Inheritance Techniques
Class 13	**Midterm (February 5)**
Class 14	Talk 1: 2/26 : TBA
Class 15	Talk 2: 2/28 : TBA
Class 16	Talk 3: 3/04 : TBA
Class 17	Talk 4: 3/06 : TBA
Class 18	Talk 5: 3/11 : TBA

Class 19	Talk 6: 3/13 : TBA
Class 20	(*WRAP-UP*)
	Finals (March 20, 8pm-10pm)
Extra	Design Patterns and Frameworks
Extra	Abstract Data Types
Extra	Program Correctness

Assignments (`Winter 08`)

- Assignment 1.
- Assignment 2.

Exams (`Winter 07`)

- Midterm .
- Final.

T. K. Prasad (07 Jan 2008)